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THE MICHIGAN FARMER,

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Relating to the Farm, the Garden, and the Household.

NEW SERIES.

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The Farm.

The State Fair.

Last week we had neither room nor time to call attention to the State Fair and the exhibitors whose exertions added to make it what it was most truly—the best, the most numerously attended, and the most important exhibition of agricultural stock, manufacturers' implements, machines, and of industrial productions, that has ever been seen in this State. We propose now to take a flying glance at this great exhibition, not to enter into detail, but to call up for notice subjects which mark the advance of the State in the several divisions; and first we shall take up the show of CATTLE.

The whole number of entries of cattle at the present Fair was 215, which were divided as follows:

Short-horns.....	54
Devons.....	54
Herefords.....	13
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The Short-horn breeders of the State, however, were not all present. We missed from the rows of stalls the stock of the Messrs. Brooks, and there were none to represent the breeders of Macomb county or of Ionia county, who have always borne off some of the prizes. But the animals shown the present year were of a higher grade, and the judges found it more difficult to make their awards than usual. In the Short-horns, the Dexter stock was particularly fortunate, bearing off the first premium for the best aged bull, for the best aged cow, and for the best herd—a result hardly anticipated by the owner. Sirloin is a bull that is hard to beat, especially when his quality of getting superior stock is considered. The contest for the second premium lay between a son of Bletsoe, shown by Mr. Barber, of N. Y., and Lenox, the best prize bull of last year. Neither of these bulls is perfect. Young Bletsoe is somewhat coarse, and though of fair quality, lacks in some points, and is not prominent in

any. Of his character as a stock getter we have had as yet no opportunity to judge, though this is the point which ought to be attended to as the most important. Lenox, his chief competitor, on the contrary, has some points very prominent and in which he is not excelled, whilst he fails in others. Amongst his best points are fineness of bone, depth of brisket, width of chest, fullness in the crops, and straightness of back. His weak points are those that are most easily amended in his stock, being shortness of body and shortness of hips, and lightness without defect in power in the hind quarters. In handling quality also he does not come up to what is known as first-class. But his general excellence, from his coupling forward, and the strong marks he exhibits of a fine constitution, as well as his descent from good milking families, has always commended him as a good animal that would prove of great service in any locality, and especially in particular herds where lightness in the chest was prevalent.

Orpheus, the son of Songstress, still maintains his supremacy in his class. This year he was at the head of the three year olds. He is improving in form as he approaches maturity. His quality as a stock getter was well maintained, by the proof which "Farmer Boy," a yearling belonging to Messrs. Tillotson & Wornley, afforded. The two year old of B. Loveman, of Owosso, took off the first prize in his class, and besides this the committee appended to the blue ribbon the following words: "A very superior animal."

The cows and heifers exhibited showed a manifest improvement, and the competition for the blue and red ribbons was very strong. Mr. Barber of New York had several good animals on hand, and one of them was a particularly fine cow. But for quality the Dexter stock was ahead of all. As we propose to see this stock at its home, as well as that brought up from Ohio by Messrs. Arnold and Warner, we shall not make a longer notice of it here. It is enough to say that this stock bore off the premium for herds, and there was not the least grumbling at the award. Nothing more could be said so much to the purpose. There were four herds exhibited, and they formed a grand feature in the exhibition. It is the first time that a class of herds have been exhibited in this State, and the event marks the progress which Michigan has made in introducing thorough bred cattle. Her show of Short-horns consists no longer of single animals of doubtful parentage and still more doubtful quality. But now herds are shown, many of them with the blood of the most noted and best families thickly intermingled in their veins. Of the four herds shown, three were from this State, and one from New York; Messrs. Crippen of Coldwater, Messrs. Sly of Plymouth, and Dexter of Dexter, being the exhibitors from Michigan, and Messrs. A. and J. Barber, of Avon, Livingston county, the exhibitors from New York.

James E. McKinley, of Aldborough, Canada West, had a bull, of which the viewing committee remark, "A fine bred animal, and worthy of notice." There were also present some good animals in this class from Jackson and Lenawee counties, of which Morgan Case of Napoleon and J. W. Kenney of Tip-ton are the owners. Old Guelph, in all the plenitude of his thirteen years of age, was present, exhibiting as much the skill of his feeder and owner as his own remarkable quality and power. For bringing forward this ancient animal in such splendid condition, our friend Lyndon ought to have had a diploma as one of the most skillful feeders in this State. The old bull has not had a tooth in his head for the last three years, and yet he looked as smooth as a three year old.

THE HEREFORDS.

The Herefords showed themselves in greater numbers than usual, but C. M. Bowen, of Lima, was the only exhibitor from this State. Aston of Elyria, Ohio, had nine head on the ground, and they made a fine show. The quality of this stock as feeders is as yet but little known with us, but they deserve a good trial.

THE DEVONS.

The Devons shown were 64 in number, and comprised a selection from the most celebrated herds in the Northwest. From this

State there were exhibited herds by J. W. Childs of Washtenaw county, Allen and Sons of Coldwater, C. H. Williams, of Coldwater, the Messrs. Ballard of Niles, and Ira H. Butterfield of Macomb county; and from Ohio by C. T. West of Elyria. It will be noted that Mr. Richards of Tecumseh bore off the first prize with his young Duke of Devon. These breeders have been taking much care to improve their stock, and their exhibition was one of the best of this breed ever seen in the Northwest. The stock exhibited by Mr. Butterfield had been recently purchased from L. F. Allen, of Black Rock, N. Y. In the exhibition of this class there was more emulation than we have before seen at State fairs. One of the difficulties that Devon breeders have to contend with is the difficulty in procuring competent judges of this kind of stock. Nearly every man who knows the quality and points of Devons is a breeder or competitor; all the rest have their eyes filled up with the portly form and square build of the Durhams, and they constantly compare the one breed with the other, instead of the points of the Devon with the stock itself. It will be seen by the action of the executive committee that a very respectable protest has been entered against the awards on the herds, based on the alleged grade blood infused into a single animal, and which, it is declared by the other competitors, depreciates the stock. The breeding of Devons and the awards of the State Society render the question of pure breeding one of importance, and hence the necessity of well authenticated pedigrees or statements of descent. But of this matter we shall treat more fully by and by, for there seems to be a want of information as to what makes purity of descent.

THE AYRSHIRES.

The Ayrshires were represented by two entries, one a three year old bull shown by J. Kellehar, of Marshall, and the other by Mr. Chas. Crawford of Commerce, Oakland county. Both of these were remarkably good animals for three year olds. There is some dispute relative to the breeding of Mr. Crawford's bull, to which was awarded the first premium, owing, as we believe, to carelessness on the part of his owner in procuring proper certificates of his descent, or of his breeding. These papers Mr. Crawford is required to exhibit or lose the award. This decision is based upon the rule that in all cases of animals shown as being pure bred, their owners are required to prove their descent from imported animals, in a manner satisfactory to the judges.

The exhibition of cross bloods was somewhat light, owing in a measure to the fact that but few have any opportunity of breeding cross bred animals, and these who have the animals to breed with prefer to keep them for breeding full bred stock of their own family. In this class C. W. Green of Farmington was the principal exhibitor, and a number of the animals shown by him were very fine indeed.

The Grades and Natives were likewise few in number, being but nineteen. There was nothing in this class deserving of especial comment.

In Working Oxen the exhibition was very good as far as it went, but eight yoke of oxen fit to contend for a first premium at a State Fair, cannot be considered any very great exhibition for Michigan. J. H. Button of Farmington bore off the first premium, followed by C. W. Greene and Robert Rome. The best premiums in this class are always borne off by Grades and Natives. This is a fact that is worth noticing.

The exhibition of Steers was much and highly spoken of; not on account of numbers, but for quality, and for the exhibition of training which was given by Mr. Rufus Pierson of Lapeer, who stated that the steers he exhibited had only been under his care for one month, and yet they were in such condition that they followed and obeyed the lightest sign or word of the driver, and worked equally well on either side of the yoke. His mode of treatment is "kindness and good temper under all circumstances."

The exhibition of Milch Cows was ridiculous in number, only three being shown, one of them being the full blood short-horn Red Jacket, belonging to the herd of the Messrs. Sly. This animal is a very fine cow, and valuable both as a breeder and milker. A

great deal is said about keeping up our milch stock, but after all Michigan is not yet much of a dairy State, and but little interest is shown as yet in the raising of milk stock.

Mr. Ira Mayhew of Albion exhibited a pen of deer that attracted great attention. There were of these one buck, two does, and two fawns. He made a very fine addition to the interest of the exhibition.

In summing up the whole exhibition of cattle, it may safely be said that the present year gives signs of a greater progress and a higher improvement, as well as of a better knowledge among breeders, than any State Fair has yet done;—and when the progeny of such bulls as Orpheus, Sirloin, and one or two others, from some of the dams that are now in the State, are to be seen at our State Fairs, there need be no ignoble fears that Michigan will not be able to take care of herself at any exhibition, whether National or State.

The Horses at the State Fair.

The show of horses at the State Fair is conceded to have been one of the best that has ever been seen in Michigan. It has been excelled in numbers, but not in quality; and what is better still, the promise for the future is of the richest kind. The introduction within the past four or five years of a better class of stallions is beginning to develop its effects, and the various families are getting ready to strive against each other. Most of the progeny are yet too young to enable any one to say what the result will be, but the Abdallah and Columbus stock, though limited in number, are full of promise; whilst the Coldwater branches of the Black Hawks are coming up in great force, and bear off the honors as yet, having somewhat the advantage in time and maturity.

The number of entries of horses altogether was 342, which was divided in their classes as follows:

Class 1. Horses of all work.....	65
" 2. Black Hawks and Morgans.....	31
" 3. Thoroughbreds.....	9
" 4. Part Thoroughbreds.....	31
" 5. Draft horses.....	31
" 6. Trotting stock.....	39
" 7. Stables of colts.....	4
" 8. Matched and Single horses.....	65
" 9. Jacks and Mules.....	10

The aged stallions of all work that were shown were very superior as a class, and the competition was very considerable. The first premium was awarded to a grey Messenger horse belonging to Byron Green of this city, of Messenger breeding. He is a fine animal, and comes within the requirements of the standard of all work. What his abilities may be as a sire of colts remains to be proved. Kemble Jackson, the slashing bay stallion belonging to F. E. Eldred was awarded the second premium. Those who have seen this horse at previous shows were hardly prepared for the very great improvement which the last two years' growth has made in his appearance. The third premium in this class was awarded to a horse shown by R. Hamilton of Romeo; he was pure Hamiltonian stock. The Jackson colt, of Charles Groh, which has borne off the first premium in his class every year since he was a sucking colt, proved the good judgment of preceding committees by again taking the first premium as a three year old—a fact very creditable and worthy of notice. The three brood mares which took the premiums in this class were very fine. We have seldom seen a better specimen of the brood mare of all work than the dark brown "Lady Plover," owned by Mr. Knight of Marshall. She has length, size, color, style, and limbs, with very fine action. Mr. York's bay mare was also very good, but hardly so stylish and finely bred as the former. Mr. Treadwell's Gipsy was also a first-rate brood mare. These three mares had each colts by their side, by Stone Plover, and formed a group such as is seldom met with in any collection. We saw nothing equal to it at the National Fair at Chicago.

The Executive Committee last winter gave the Blackhaws and Morgans a class by themselves, not only as the means of showing their peculiar qualities, which as roadsters and family horses rank very high, but also as a way by which the classes of "all work" and of "trotting stock" might be relieved from the great pressure which so many entries make upon the committee and judges. In this class, however, there were but thirty-one

entries altogether, and of these only seven were mares or fillies; and but one of these was four years old. There were, however, nine stallions of four years old and over, at the head of which was Magna Charta. Nearly all of the stallions shown in this class were good animals, and some of them, combined with their breeding a size and quality of bone and muscle that showed that these important points had not been overlooked.

We enumerate the names of the horses and their owners, as each of them is somewhat noted in their localities, and if not awarded the premiums, were beaten honorably; the judges who had this class in charge being fully competent to judge of them, most of them, to our own knowledge, having had considerable experience with this very class, either handling them or breeding them for years, and watching their growth in this State almost since their introduction. Of Magna Charta, the first premium, we do not speak here, as we give him a chapter by himself. Mr. E. B. Smith, of St. Clair, exhibited Selim, that took the first prize last year; F. E. Eldred exhibited Glen Black Hawk, that took the second prize at the Kalamazoo exhibition of 1858. F. McHardy, of Almont, had a splendid large sized Black Hawk named Triumph, very excellent in many points. W. Spader of Seneca, N. Y., had a six years old Morgan. J. Starkweather of Ypsilanti entered Sebastopol. W. S. Carr, of Manchester, entered Peacock Morgan;—A. C. Fisk, of Coldwater, Othello, a son of Black Hawk. J. W. Merritt, of Plymouth, exhibited his handsome Black Hawk Junior. These were all the aged stallions shown in this class, and competition was sharp. The test of speed against time was applied, when it was found that the time of

Magna Charta, owned by Smith & Co., of Coldwater, was.....	2.47
Selim, E. B. Smith & Co., of St. Clair.....	3.03
Triumph, F. McHardy, Almont.....	3.20
Black Hawk Jr., J. W. Merritt of Plymouth.....	3.21
Glen Black Hawk, F. E. Eldred, Detroit.....	3.33
Othello, A. C. Fisk of Coldwater.....	3.38

In the other departments of this class there was some fine stock, but only two mares. Why is it that there are so few mares of this favorite stock, whilst we are flooded with males that are warranted to do excellent service in breeding roadsters? Of this class we very seldom see entered at any Fair, State or otherwise, brood mares with any degree of relation to or claim of pedigree that brings them within the Black Hawk or Morgan category.

THE SHOW OF THOROUGHBREDS.

was limited to three stallions, namely: Stone Plover, Capt. Buford, and a New York horse, named "Yankee Boy," owned and exhibited by D. G. Dowell, Esq., of Orleans Co. N. Y. The mares entered were Lady Jane, by F. E. Eldred, and her filly colt; Madeline, by E. N. Wilcox, and Young Magnolia, a three year old filly by Billy Boston, from Madeline. As yet we have no remarks to make on this department, the whole matter of rules, pedigrees, and thoroughness of breeding will be taken up and discussed by itself, in a future paper, more especially as the question of pedigree and thorough breeding is fully as applicable to cattle, sheep and swine, as to horses. It will also be our duty to treat the whole subject with the utmost impartiality, and solely with a view to promote a better knowledge of the subject in the State, and afford information which will aid our readers and friends to discriminate, and not permit themselves to be imposed upon by partial pedigrees and documents evidently drawn up to deceive the unwary and inexperienced.

HORSES PARTLY THOROUGHBRED.

We had an opportunity last year of visiting the great annual exhibition of Ohio, and when at Sandusky were impressed with the idea that Ohio was far behind us in the quality of her horses. Every year Michigan is making a step in advance, and the present year the State Fair showed a decided improvement over every other. Especially is this to be noticed in the quality, breeding and size of the colts that are coming forward, and we do not hesitate to predict that with a clear unbiased judgment based on the principles of breeding, and a correct knowledge of what stock should be selected, introduced and bred from, to improve the quality of Michigan

FOREIGN AGRICULTURE.

General View of the Nutrition of Plants.

BY BARON VON LIEBIG.

In a series of letters on Husbandry recently published by the celebrated Von Liebig, he gives the following views of the nutrition of plants:

To comprehend clearly the existing system of agriculture, we must recall to mind the most general condition of the life of plants.

Plants contain combustible and incombustible constituents. The latter, which compose the ash left by all parts of plants, on combustion, consist in the case of our cultivated plants, essentially of phosphoric acid, potash, silicic and sulphuric acids, lime, magnesia, iron, chloride of sodium.

It is now regarded as an undisputed fact, that the constituents of the ash are elements of food, and hence are indispensable to the structure of the different parts of the plant. Its combustible portion is derived from carbonic acid, water, and ammonia, which as elements of food are equally indispensable.

By the vital process plants are formed from these materials, when the atmosphere and soil supply them at the same time in suitable quantity, and in the proper proportions.—The atmospheric elements do not nourish without the simultaneous action of the elements of the soil; and the latter are equally valueless without the former. The presence of both is always required for the growth of the plant.

It hence follows, as a matter of course, that no single element of the food of plants, named above, possesses superiority over another: they are all of equal value to the life of the plant. But to the agriculturist, who must provide a suitable supply of all these substances in his land to accomplish his particular object, they are on the other hand of unequal value. For should there be a deficiency of one of them, he can calculate on his crop only by supplying that particular one to the soil. The deficient or absent element then acquires a superior value, that is, in relation to the other matters, (for example, lime in a lime soil) which the soil contains in greater quantity.

All elements of the food of plants belong to the mineral kingdom. The gaseous elements are taken up by the leaves; the fixed by the roots. The first are frequently constituents of the soil, and, as such, reach the interior of plants by the roots as well as by the leaves. From their nature, these gaseous elements are movable, and incombustible ingredients are immovable, and cannot of themselves leave the spot where they are found.

An element of food is ineffective if there be absent a single one of the other elements of food which are conditions of its activity.

Corn plants, and those used for fodder, require for their development the same constituents, but in very unequal proportions. The successful growth of a green crop on a field, proves that it has found in the air and in the soil the atmospheric and mineral constituents of its food in the proportions suitable for its nourishment. The failure of a corn crop on the same field, indicates that in the soil there is something wanting which is necessary for its growth. Hence we must, in every case of the failure of a cultivated crop, look to the ground for the cause, and not in any want of atmospheric food; for the same source of atmospheric food was available to the corn plant as to the green crop.

But how does the soil act, and in what manner do its constituents take part in vegetation? This question we shall now consider a little more in detail.

The process of nutrition consists in the appropriation of food. A plant grows by increasing in bulk; and its increase by the constituents of its food becoming constituents of its frame. From carbonic acid, for example, sugar is formed; silicic becomes a component part of the stem; potash of the sap; phosphoric acid, potash, lime, magnesia of the seed.

In considering the effect of an element of food, we have to distinguish between the rapidity and the duration of its action.

In general the result depends on the sum of the active elements available in the soil, in relation to the amount which the plant may altogether absorb, and does absorb, during the period of vegetation. A deficiency diminishes the crop, but an excess does not increase it beyond a certain limit. The excess comes into play in the succeeding period of vegetation. The continuous cultivation of crops is regulated by this excess which remains in the ground after each period of vegetation. If this residue is ten times greater than is necessary for a full crop, then

it will suffice for ten full crops during a period of ten years.

The rapidity with which a substance, such as a piece of sugar, is dissolved by a fluid, is in proportion to its state of division. By pulverization its surface is increased, and consequently the number of points augmented, which, in a given time, are brought in contact with the dissolving fluid. In all chemical processes of this kind, the action proceeds from the surface. An element of food in a soil acts by its surface, the portion beneath the surface is inactive, because it cannot be dissolved. Its effect, within a given time, increases the quantity taken up by the plant during that time. Fifty pounds of bones may in one year produce, according to their division, the same effect as one, two, or three hundred pounds coarsely ground. In the latter state it is by no means inefficient; but to act, that is, to become soluble, it requires a longer time. The effect produced by it is smaller, but it continues longer.

To understand correctly the effect of the soil and its constituents on vegetation, we must keep steadily in view the fact, that the elements of food present in it always possess within themselves active powers, but they are not always in a condition to exert this power. They are ready to enter into circulation, like a maiden to dance, but a partner is necessary.

The agriculturist requires eight substances in his soil, if all his plants are to flourish luxuriantly, or his fields to produce the largest crops. Many of these, though not all, are always present in quantity; three require to be added to most fields. These eight substances are like eight links of a chain round a wheel. If one is weak, the chain is soon broken, and the missing link is always the most important, without which the machine cannot be put in motion by the wheel. The strength of the chain depends on the weakest of the links.

We have hitherto believed that plants received their food from a solution, and that the rapidity of its effect was in direct proportion to its solubility. We have supposed the active elements to be carried in solution in rain water and carbonic acid to their roots, and have regarded them in the light of sponges, half in the moist ground and half in the air, continuously absorbing by their roots the water which evaporated from their leaves. Whatever was in solution passed with the water into the roots, and by the process of nutrition was appropriated by the plant. The soil and the plant were both passive in the operation.

Vegetable physiology has taught, that an element of food in the soil, at a distance from the rootlets of plants, is available as nourishment, provided there is water between the rootlets and the food to dissolve the latter.—In consequence of the evaporation from the leaves, the rootlets suck up the water, which, thus, with the substances dissolved in it, receives a movement onward towards them.—We believed that the water was the carrier of the most remote elements of the soil to the immediate presence of the plant.

If 4,000 lbs. of grain and 10,000 lbs. of straw require 100 lbs. of potash and 50 lbs. of phosphoric acid for their development, and if a hectare of ground contain these quantities in a soluble available form, then there will be sufficient for this crop. If the same field contain double, or a hundred times as much, then we should expect two or a hundred crops. This has been the physiological doctrine.

But all this has been a great mistake. We have inferred from the effect of water and carbonic acid on rocks, a similarity of action on soils; but this conclusion is false.

There is not to be found in chemistry a more wonderful phenomenon, one which more confounds all human wisdom, than is presented by the soil of a garden or field.

By the simplest experiment, any one may satisfy himself that rain water filtered through field or garden soil does not dissolve out a trace of potash, silicic acid, ammonia, or phosphoric acid. The soil does not give up to the water one particle of the food of plants which it contains. The most continuous rain cannot remove from the field, except mechanically, any of the essential constituents of its fertility.

The soil not only retains firmly all the food of plants which is actually in it, but its power to preserve all that may be useful to them, extends much further. If rain or other water, holding in solution ammonia, potash, phosphoric and silicic acids, be brought in contact with the soil, these substances disappear almost immediately from the solution; the soil withdraws them from the water. Only such substances are completely withdrawn by the soil as are indispensable articles of food

for plants; all others remain wholly or in part in solution.

If a funnel be filled with soil, and a dilute solution of silicate of potash be poured upon it, there will not be found in the filtered water a trace of potash, and only under certain circumstances silicic acid.

If freshly precipitated phosphate of lime, or phosphate of magnesia, be dissolved in water saturated with carbonic acid, and filtered in like manner through soil, there will not be found a trace of phosphoric acid in the filtered water. A solution of phosphate of lime in dilute sulphuric acid, or of phosphate of magnesia and ammonia in carbonic acid water, comport itself in the same manner. The phosphoric acid of the phosphate of lime, and the phosphoric acid and ammonia of the magnesia salt remain in the soil.

Charcoal reacts in a similar manner with many soluble salts: it removes coloring matter and salts from solutions. It is natural to look upon the effect in both cases as proceeding from the same cause. In the case of charcoal, it is chemical attraction, which proceeds from its surface; but the constituents of the soil take part in its action, and hence it must in many cases be quite different from that of charcoal.

Potash and soda are well known to stand to each other in the closest chemical relation, and even their salts have many properties in common. Chloride of potassium, for example, has the same crystalline form as chloride of sodium; and in taste and solubility they differ but slightly. An unpracticed eye can scarcely distinguish them, but the soil can do this in the most perfect manner.

If we add any soil in powder to a dilute solution of chloride of potassium, in a short time there will not be found any potassium in solution. The same quantity of earth does not withdraw from a solution of chloride of sodium, containing an equal amount of chlorine, even the half of the sodium. Consequently, a complete decomposition takes place with the potassium, but only in part with the sodium. Potash is found in all our land plants, but soda forms only an exceptional constituent of their ashes. From sulphate and nitrate of soda, the soil withdraws only a part of the soda, but the whole of the potash from the corresponding potash salts. Experiments, expressly made for this purpose, have shown that 1 litre = 1000 cubic centimetres (= 61 cubic inches Eng.) of garden soil, rich in lime, will take up the potash from 2025 cubic centimetres (= 123.6 cubic inches, or 3½ pints of a solution of silicate of potash, which contains in every 1000 cubic centimetres 2.78 grammes (= 43 gra.) of silicic acid, and 1.166 grammes (= 18 gra.) of potash. From these data we can calculate that a field of a hectare (= 2½ acres) in extent, and having a depth of a metre (= 10 inches nearly) of soil, of the same kind as that used in the experiments, would withdraw from a similar solution more than 10,000 lbs. of potash, and retain them for the use of plants. A similar experiment, made with a solution of phosphate of magnesia and ammonia in carbonic acid water, showed that a 2½ acre field would withdraw 5000 lbs. of the salt from such a solution.—A loam poor in lime produced the same effect.

These facts give us some conception of the powerful action of soils, and of the strength of their attraction for three of the chief elements of the food of our cultivated plants, which, in consequence of their solubility in pure and carbonic acid water, could not be retained in the soil, did the latter not possess this power of attraction.

From stale urine, liquid manure diluted with much water, or from a solution of guano, soil, when used in sufficient quantity, removes the whole of the ammonia, potash, and phosphoric acid which they contain. Not a trace of these substances can be found in the water which flows from the soil.

The power possessed by soils to withdraw ammonia, potash, phosphoric and silicic acid, from solution, is limited. Each soil is endowed with its own peculiar capacity in this respect. When brought in contact with these different solutions, the soil becomes saturated with the dissolved matter, and the excess of soluble substance then remains in solution, and can be detected by the ordinary re-agents. A sandy soil absorbs less than the same volume of a marly soil. The variations in the quantity of matter absorbed are as great as the differences existing among the soils. We know that no two are alike: and that certain peculiarities in cultivation stand in a certain relation to the unequal power of the different soils for absorbing one of the above substances. It is not impossible, that, by a closer study of this relation, we may arrive at quite new and unexpected means of judging of the agricultural value or fertility of our fields.

The action of a soil, rich in inorganic

matter, on the solutions above mentioned, is worthy of remark. A clay or lime soil, poor in organic matter, withdraws all the potash and silicic acid from a solution of silicate of potash; whereas one rich in so-called humus extracts the potash, but leaves the silicic acid in solution. This comportment involuntarily recalls the action of decaying vegetable remains in the soil on the growth of plants, which, like reeds and horse-tails, require a large quantity of silicic acid.—These plants abound in so-called sour moor and meadow lands; but disappear from them on the application of lime, and give place to others better fitted for fodder.

Experiment shows, that the same garden and forest soil, rich in humus, which withdraws no silicic acid from a solution of potash, immediately acquires the power to do so, if it be mixed with a little slacked lime before the silicate is added to it. Both constituents, potash and silicic acid, are then retained by the soil.

List of Premiums Awarded at the Kalamazoo National Horse Show for 1859.

Thoroughbred Stallions—First premium, \$200, H. R. Andrews, Detroit, Captain Buford; second premium, \$100, Thomas Williams, Kalamazoo, Stone Plover.

Thoroughbred Mares—Discretionary premium, F. E. Eldred, Detroit.

Road Stallions—First premium, \$150, F. V. Smith, Coldwater, Magna Charta; second premium, \$75, L. W. Smith, Battle Creek, Prince Charles.

Stallions eight years and over—First premium, \$150, J. Gale, Wisconsin, Bucephalus; second premium, \$75, J. J. Wise, New York city, Mohawk.

Stallions five years and under eight—First premium, \$100, L. Downs, Marshall, Mogul; second premium, \$50, E. N. Rising, Richfield, Young Victor.

Stallions three years and under five—First premium, \$70, S. M. Seeley, Coldwater, Senator Black Hawk; second premium, \$35, D. B. Hibbard, David Hill, Jr.

Stallions two years and under three—First premium, \$50, D. Tobey, Charleston, Mich., Young Messenger; second premium, \$25, C. A. Merriam, Crete, Ill., Jimmy York.

Draft Stallions—First premium, \$100, S. Warren, Seneca county, Ohio, Bourbonnais; second premium, \$50, George S. Hodges, Charleston, Mich., Norman Tiger.

Mares with Foals—First premium, \$70, A. C. Fisk, Coldwater, Fashion; second premium, Thomas Knight, Ceresco, Bloom.

Brood Mares—First premium, \$50, H. M. Wright, Coldwater, Highflyer; second premium, \$25, O. B. Flag, Kalamazoo, Kitty.

Fillies four years and under five—First premium, \$40, H. N. Moore, Coldwater, Jenny Moore; second premium, \$20, Wm. Haywood, Charleston, Mich., Jenny.

Fillies three years and under four—First premium, \$30, H. R. Andrews, Detroit, Magnolia; second premium, \$15, F. V. Smith, Coldwater, Miss McBride.

Fillies two years and under three—First premium, \$20, F. Lewis, Schoolcraft, Lady Morgan; second premium, \$10, E. H. Davis, Kalamazoo, Young Lady.

Fillies one year and under two—First premium, \$16, J. Caniff, Detroit, Forest Rose; second premium, \$8, C. C. Hill, Texas, Mich Rose Beauty.

Colts four years and under five—First premium, \$40, F. V. Smith, Coldwater, Elder Sniffles; second premium, \$20, H. N. Moore, Coldwater, Watchmaker.

Colts three years and under four—First premium, \$30, P. Goodrich, Comstock, Mich.; second premium, \$15, P. C. Lowe, Florence, Shanghai.

Colts two years and under three, in harness—First premium, \$20, J. B. Crippen, Coldwater, Lounger; second premium, \$10, J. Gale, Wisconsin, Flora Temple.

Colts one year and under two, in harness—First premium, \$20, C. Fulkerson, Marango, Marvel; second premium, \$10, E. Butterworth, Coldwater, Timer.

Colts under eight months—First premium, \$16, A. C. Fish, Coldwater, Lady Moscow; second premium, \$8, F. E. Eldred, Detroit, Bonnybrook.

Matched Horses, Mares or Geldings—First premium, \$100, Crofoot & Burrill, Pontiac; second premium, \$50, D. Knapp, Jackson.

Matched Horses, sixteen hands and over—First premium, \$100, C. Van Ness, Coldwater; second premium, \$50, Morris Knapp, Jackson.

Family Horses, Mares or Geldings—First premium, \$50, A. J. Dean, Chicago; second premium, \$25, W. A. House, Chicago.

Gentlemen's Driving Horses—First premium, \$50, F. V. Smith, Coldwater, Grey Etina; second premium, \$25, John C. Bassett, Kalamazoo, Jenny Lind; discretionary premium, A. Ferguson, Kalamazoo, Dick.

Gentlemen's Saddle Horses—First premium, \$20, F. O. Rogers, Niles, Prince; second premium, \$10, J. F. Raynault, Jackson, Chelsea.

Ladies' Saddle Horses—First premium, \$20, H. H. Yates, Chicago, Black Swan; second premium, \$10, H. Mower, Kalamazoo, Billy.

Ponies—First premium, \$10, W. R. Cady, Grand Rapids; second premium, \$5, G. B. Pratt, Marshall.

Farm or Draft Horses—First premium, \$40, O. Davenport, Portage; second premium, \$20, Hoskins & Noble, Wayland.

Single Farm or Draft Horse—First premium, \$20, George Hodges, Comstock, Tiger.

Best Stallion making the Season in Kalamazoo County—Thomas Williams, Kalamazoo, Stone Plover.

County Agricultural Fairs.

Never since our connection with the *FARMER* have we noticed among our exchanges from different parts of the State so much enthusiasm respecting agricultural fairs as there has been during the past season. Success seems to have attended these exhibitions in every quarter. In many cases, even drenching rains of days together could not dampen the ardor of emulation that burned among the farming population—the desire to show what they had done, to see what others had done, to compare to learn, to get knowledge and wisdom for the future. This spirit of enterprise, now so thoroughly roused, will not die out. It will grow and strengthen, and infuse new life into the farming population year after year, till they learn fully to appreciate the dignity and importance of their own calling. They learn that intelligence and skill are as necessary to success as the plow and hoe, and in proportion as they profit by this knowledge will they increase their own self-respect and rise, as a class, in the estimation of the world.

These annual fairs are the farmers' schools. We give a few extracts from papers of different counties to show how they have been attended:

OAKLAND COUNTY FAIR.

In fruit, the show is quite large and much better than we saw at the State Fair. We believe ours is the best fruit county in the State.

In the fine arts and floral departments, the show is not large, though there are many excellent articles. The mechanical department was never better. There are several fine threshing machines, of different patterns, all the various mowers and reapers, and the other improved agricultural implements so necessary to the progressive farmer.

The show of cattle was as good as we have ever seen at our fair.

On the whole, this fair has been a perfect triumph for Oakland county. The receipts far exceed those of any previous occasion, and will enable the Society to pay up all its floating indebtedness, and start with new life and new zeal, in the advancement of the greatest cause in which our race is engaged.—*Jacksonian*.

KENT COUNTY FAIR.

The entry books closed with 756 entries made, being 115 more than were made last year, and 245 more than were made two years ago; showing a steady gain, and that in the right direction, the entire gain being in stock, vegetables, seeds and farming implements.—Although the past season has been a very unfortunate one for vegetables, yet there was the best display yesterday ever made in this county.

There is a large collection of agricultural implements, most of them manufactured in this city.

All acknowledged that there was a much finer display of blood cattle than was ever shown before in this county; this department has made wonderful improvements during the past two years, and it was really gratifying to gaze at the long line numbering nearly 100, and listen to the many exclamations of wonder and surprise of the old gray headed farmers as they surveyed the noble animals.

Sheep did not make so much of a show as was expected, although there is an improvement in coarse wool, over last year.

Horse flesh is really in the ascendant and there was a magnificent display, and some good trotting.—*Grand Rapids Herald*.

CALHOUN COUNTY FAIR.

The entries of stock this year amount to 380, and all other entries 663. The amount of receipts we have not learned.

All the fruit exhibited was very good, better than we have ever seen at any fair.

These annual gatherings are holidays, when all congregate together, as brethren of one family, and enjoy the sight of our productions, and where they can intermingle with the most useful results. Let us all devote ourselves with renewed energy, and zeal to make them still more useful and perpetual.—*Marshall Ex.*

INGHAM COUNTY FAIR.

The County Fair was a decided success.—We can discover a very marked and gratifying

improvement, within the past three years, in the line of stock, as indicated by the fairs of the Society.

In fruit and vegetables, the display could not very well be excelled.

In farm implements and mechanic arts there was a deficiency. More interest might profitably be taken in this department.

The Ladies' department contained some very creditable articles.—*Lansing Journal*.

SANILAC COUNTY FAIR.

The show of stock was not large, but better than usual at county fairs, in quality.—The show of working cattle cannot be beaten in the State. Nobler, better made, or heavier cattle cannot be found. I have never seen as good an exhibition of oxen, at any State fair, and fully believe Sanilac would carry off the palm from any other county.

No county can produce a finer or better lot of vegetables. Potatoes, turnips, beets, carrots, and culinary vegetables of all kinds, that would do credit to any soil or culture.—Peaches, plums and apples, of superior quality. I was surprised to find any fruit, supposing that Sanilac had suffered equally with St. Clair; but I learned that while almost all other sections of the State suffered from the frost, the much dreaded lake winds fully protected fruit along the lake shore. There is no doubt that Sanilac will prove to be one of the best fruit counties in the State, and that we shall soon look to it for our supply of peaches.

The samples of wheat and grain confirmed the already conceded fact that there is no better wheat and grain country than Sanilac possesses. Our pine lands are proving to be among the very best for agricultural purposes; and Sanilac and St. Clair, when the pine is all gone, will be far better off, and possess more elements of wealth, than all the lumber they are sending to market.—*Jeffersonian*.

MONROE COUNTY FAIR.

The departments which were the best filled were the fruit and vegetable departments.—The show of fruit was magnificent—especially in apples, exceeding, as stated by a person perfectly competent and reliable, the show at the great United States Fair recently held at Chicago.

The specimens of wheat, corn, millet, &c., &c., were fine, showing that Monroe county is not behind in the ability to raise the first quality of the staples of life.

Of horses there was a large entry—there being 32 entries of Stallions, brood mares and colts; and 70 entries of other horses—it would be beyond the scope of this article to notice such a large number.

The prospects of the society are flattering; and with proper encouragement in the future the exhibition will be worthy of the county. The receipts this year exceed those of last year considerably.—*Commercial*.

WASHTENAW COUNTY FAIR.

The show of Durhams was very fine, embracing nearly all the best herds in the county. Number of entries 27.

Horses were well represented, the entries being 493.

Of sheep there was an immense show—better, both in number and quality, than ever was seen at any one of the State Fairs. In fact, Washtenaw challenges the whole State to show better sheep than were exhibited at our fair.

The show of bread, butter, cheese, honey, etc., was good. In domestic manufactures it was also good. In farm implements excellent.

The total number of entries in all classes was 1643.

The receipts at the gates amounted to \$1,700, the membership tickets the total receipts over \$1,800.—*News*.

BARRY COUNTY FAIR.

The fair of the Barry County Agricultural Society was decidedly a success. The exhibition of stock of all kinds was superior to any which have ever before come together in the county. Of grain, vegetables and fruit there were good specimens of nearly every kind, but there was not competition enough to render the exhibition as interesting as it should have been.

The Ladies' department to the fair embraced a larger assortment of domestic manufactures than we expected to see, and was marked by sharp competition for the various premiums.—*Banner*.

GENESEE COUNTY FAIR.

The prosperity of the Genesee County Agricultural Society keeps pace, year by year, with the progress of the county and city in population, and the development of their internal resources. The fair grounds yesterday were crowded beyond all precedent, with Visitors, Members, and Competitors for premiums. There could not have been less than from 7,000 to 10,000 persons in town.—*Citizen*.

IONIA COUNTY FAIR.

The Ionia fair is justly regarded as a very creditable one to the Agriculturalists of Ionia county, and a decided improvement upon any previous fair held within the county.

The list of entries amount to about one hundred and sixty.

The display of farm products was not large, but everything on exhibition was of excellent quality. The largest variety was in the stock department. We venture to say that at no agricultural fair in Michigan has there been a better display of cattle than there was upon this occasion.—*Gazette*.

CLINTON COUNTY FAIR.

There was quite a large display of stock in town, and some good looking horses. The display of vegetables and flowers, and of different articles of ladies' manufacture, though not so numerous as heretofore, yet were of an excellent quality, and drew commendations from the visitors present.—*St. Johns Democrat*.

HILLSDALE COUNTY FAIR.

The total number of entries was 841—as

follows: Horses, 272; cattle, 123; sheep, 44; swine, 15; poultry, 13; manufactured articles, 221; products, 147; unenumerated articles, 6. The receipts for tickets was \$806, being the largest ever before received.—*Standard*.

BERRIEN COUNTY FAIR.

The fair was, we believe, a success. Much of the stock on exhibition was as good as the county affords.

Only a few varieties of sheep were entered, and but few of them above medium. The horse department of the show was exceedingly fine, and a very large number of fine horses were on exhibition.

In the fruit department, the show was excellent, and can not be surpassed in this State, or at any fair, State or county, or by any region of country this side of the Gulf of Mexico.—*Inquirer*.

BRANCH COUNTY FAIR.

The grounds were literally crowded, and all seemed to display a lively and gratifying interest in the exhibition and proceedings.

The mechanical department was extensive and formed an interesting feature, almost every imaginary branch being represented; while the agricultural and domestic departments were worthy of all praise.

The collection of live stock was extensive and superior, and their exhibition orderly and gratifying.

The receipts were sufficient to pay all premiums and expenses and leave a surplus, which bespeaks a decided success.—*Union*.

NEW ADVERTISEMENTS.

PURMAN SMITH & Co., Detroit, Minister's Wearing. GEORGE BEARD, Detroit,.....Fruits, &c., wanted. E. T. BRYAN, Marengo,.....Sheep for sale.

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, OCTOBER 22, 1859.

The State Fair.

Our avocations during the State Fair, though causing us to have a great deal to do with it, did not leave us much opportunity to see what was present. Still, most of the stock we had a passing glance at, much of it we had seen at its home, and much of it we knew by reputation. Our notes upon the subject are not yet written out fully, but will refer to the sheep, swine, and poultry, as well as the implements, in the next issue.

The Fair and its management was not by and means perfect; and as we know better wherein it failed, we do not hesitate to point out the defects, that some attempts may be made at the next one to render it more perfect.

In the first place there was a little too much "horse," and not sufficient opportunity or time was given the cattle exhibitors to show their stock. Yet in this the Executive or Business Committee was not to blame, for the design was to have given the greater part of the second day to that interest. The real cause exists in the dilatoriness with which the exhibitors themselves arrive at the Fair, making it generally Wednesday noon before the entry books can be closed, when in reality they should be closed on Tuesday night, and the whole of the committee books should be ready to be put into the hands of the committees on Wednesday morning. Again, the committee men are very slow to report themselves; it is seldom that more than one half of those appointed are present, and much time is used in filling up the vacancies, and when filled, in getting the committee men together. At the late Fair there were fewer vacancies than usual in the committees. But still much time was consumed in getting them fairly at work, and it was Wednesday noon before the examinations of the cattle could be commenced. Knowing that on Thursday the address and exercises connected therewith would necessarily consume a large portion of that day, it was desirable to throw a portion of the examinations of horses into Wednesday, and as the weather of Tuesday and the proceedings of Wednesday turned out, it was most fortunate that it was so arranged, but it mixed in the horses and cattle too much, and so that in exclaiming, there was a "little too much horse at this Fair," there is some justice in the remark, and it is worthy of notice, as a part of the proceedings which ought to be amended, if possible, in the future. Another cause of some complaint arose from the cattle men, that no provision was made for their high priced bulls.—I'll last year there never had been any provision made for the shelter of either horses or cattle; and there was no complaint whatever. Now it is claimed that provision of close stalls should be made for the bulls, especially the Shorthorns, as these animals are accustomed to be kept up in close stalls. This is another of those subjects which it would be well for the Business Committee to attend to another year.

One great source of satisfaction to the managers of the Fair arose from the evident

satisfaction which the Fair has afforded to the citizens of Detroit, as well as to its visitors from the country. We have not heard a man, in business or out of business, since its close, say otherwise than that at last the State Society had got itself on a sound footing, and was really a benefit in bringing this city and the rest of the State into closer communion with each other.

The proceeds of the fair were also eminently satisfactory, though not enough to clear the Society from its indebtedness and to pay all the expenses and premiums. We do not claim that this result is altogether owing to the change in the ticket system, because after all it must be allowed that the exhibition of 1859 had been rendered more attractive than any that had ever been got up in this State. In cost more to get it up. The arrangements for accommodation and for rendering it a great gathering of the agricultural and other industrial interests, were more extensive and costly—it was but just that its receipts should be greater, as they were, than ever before received. To render the grounds and buildings what they were, over three hundred thousand feet of timber has been used, and is at this moment the property of the Society. To put the buildings and fixtures in their present shape, cost last year \$2,100, and the present year \$2,300; and now the Society is prepared to have another fair on the same grounds at a mere nominal outlay for fixtures. The investment has been made, let us hope that the Society will find their account in it another year.

The Annual Address, and the Firemen of Detroit.

The annual address delivered by Governor Banks was a most eloquent production. The printed document hardly does it justice. Some of the finest illustrations were made by the orator on the spur of the moment, and were not reported. It was listened to attentively by one of the largest audiences that ever met to hear a single speaker in this State, and amply repaid all who heard it. The preparations for its delivery were most effective and the scene presented to the speaker was such as must have aroused the dullest mind to a high pitch of exaltation.

The grand stand is composed of a series of seats rising, to the number of ten, one above the other; in the centre and half way up, a platform with a railing was erected, from which the speaker addressed the audience.—On the stand closely packed around him, in living masses, were seated over two thousand hearers; before him on the ground, as far as his voice could reach, were gathered ten thousand more; and this audience listened to him steadily from three o'clock till nearly five in the afternoon, in the most perfect order, with the exception of now and then an outburst of applause. Governor Banks himself felt that the occasion was a grand one, and that the preparations to do him honor were a worthy tribute of respect to a representative of the Old Bay State, in all her grand historic position as the mother of a mighty race, first in the arts of peace and love of industrial pursuits, that had helped to people the broad west and to make the silent wilderness blossom with more than the beauty of his own New England home; he stood with the golden sun-light streaming upon him, and the mild west wind bearing his voice over the upturned faces of the people of Michigan, and saw beneath him the plain covered with human beings, the vast buildings filled with the productions of their industry, long ranges of implements and machinery, crowds of the finest horses, herds of the best breeds of cattle, pens filled with the representatives of flocks that furnish the manufacturers of his native State with material for their finest and most costly fabrics, and behind all were the spires, towers and gleaming roofs of a large city, the metropolis of a great and independent State, while far off in the background glistened the waters of the broad river that connects the great lakes with the thunders of Niagara and the mighty ocean that laps the rock-bound coast of Massachusetts. He had a right to be eloquent, and he was—the occasion was a grand one, and he did it honor.

Governor Banks during his residence in Detroit, was the guest of the Hon. Z. Chandler. It having become known to the Fire Department of the city that the Governor had been through the probation of fireman, an escort was tendered to him through the Business Committee, and the whole array of firemen in their full dress uniforms, with the engines of the several companies decorated with flowers, turned out and escorted him to the fair grounds. With these were two of the military companies of the city—The Detroit Light Guards and the Detroit Light Infantry. The whole affair made a very brilliant appearance, and was a most gratifying addition to the programme.

Last week in the report of the proceedings of the Society, the types have made Mr. Crippen say that he had been for "ten times" a member of the Executive Committee. This is spreading it on pretty thick for so young a man; the words should have been "two terms."

Mrs. Stowe's New Book.

It will be seen by reference to our advertising columns that *The Minister's Woe* is now published entire in book form, and is ready for sale in this city.

We acknowledge the receipt of a copy from Messrs. Putnam, Smith & Co., and shall endeavor to give it an extended notice soon.

A Plaster Vase.

Hovey & Co. of Grand Rapids have left in our office a pretty flower vase made from plaster. It is smooth, without grain, polished, clouded, and hard like marble, being turned entire from a block, as wooden vessels are turned. The beautiful colors of this plaster, and the high finish it is capable of receiving, make it ornamental as well as useful.

It will be noted by an advertisement that Mr. E. T. Bryan of Marshall has some full blood Leicester and South Down sheep for sale. The sheep bred by Mr. Bryan are good; he has been paying much attention to getting flocks of these breeds for some years.

Shorthorns for Sale.

It will be noted by the advertisement that Mr. F. E. Walbridge of Kalamazoo offers for sale a few head of Shorthorns of approved breeding. The stock from which these animals were bred, was selected by A. Y. Moore, Esq., for his own use. *Strakosh*, the sire of Snowball, was by Hearts of Oak, a most excellent animal imported by the Shakers.—Ophelia was also sired by Hearts of Oak, and her calf by Orpheus ought to prove a most valuable animal to go into any neighborhood in or out of this State; she is from Red Rose, by Chesterfield, a bull sired by imported Comet.

Those who are making arrangements to plant out gardens or nurseries, during the present fall or coming spring would do well to give attention to the assortment of trees, plants, shrubs and greenhouse plants advertised by Wm. Adair. This enterprising nurseryman and florist has been increasing his stock, and adding to it all varieties which will stand our climate.

The hand straw and stalk cutter advertised by C. P. Woodruff & Co., was awarded the first premium at the State Fair, and is a very handy article for economizing the feed of stock.

Bay County Wheat.

We were shown last week, at the Bay City Flouring Mills, a quantity of wheat, raised within a mile of this place, which is of as good quality as can be produced elsewhere in the State. It weighed just 60 pounds to the bushel. Facts like this speak well for the productiveness of the soil of Bay county.—*Press*.

Rye in Sanilac County.

Mr. J. McKenzie, living near Port Sanilac, has sent us a beautiful specimen of white Rye raised on his place on the lake shore, and although it was got in under unfavorable circumstances, it yielded 32½ bushels of 60 lbs. each, per acre, showing conclusively that as good rye can be raised in this vicinity as elsewhere.—*Jeffersonian*.

Owners Wanted.

For articles left in the Entry Office on the Fair ground, and now in the office of the MICHIGAN FARMER. A blue silk parasol, a green worsted coat for a little boy, and a crocheted tidy with an entry ticket on it bearing the name of Miss Carrie Wilcox, Livonia Centre. Owners can have the above by calling for them.

King's Iron Fence Post.

Among the many useful inventions on the fair ground last week, for beautifying farm homes, we noticed a neat portable fence with patent iron posts exhibited by King & Brothers, patentees, of West Andover, Ohio. A full pannel of the fence with a gate attached was shown, and, for convenience, economy, durability and beauty, we should think it could hardly be excelled. The gate is kept in position by a spring which throws it shut without any effort of the one passing through, thus preventing any accident from open gates, as it will not stay open even if left so. The

posts are hollow and in two parts which can be unbolted and separated to move at pleasure, and are attached to an iron foot block from which also they can be removed with ease when necessary. The fence can be made plain or ornamental to suit the fancy of the owner. We notice that this patent has taken first premiums and silver medals at several State fairs, both last year and this; also it was awarded a diploma at the late United States Fair held at Chicago, and the same at our own State Fair of last week. The patentees have State, town and county rights for sale.

The types played such pranks with one paragraph in our article under the head of AGRICULTURAL IMPLEMENTS, in last week's issue of the FARMER, as to render it quite unintelligible. On which account we are induced to reprint that article in this number.

We were also led into an inaccuracy as to a matter of fact, which is corrected in the article as now published:—

Agricultural Implements.

Our Peninsular State is securing an honorable name for its manufactures. Especially is this true in regard to manufactures of iron and steel and implements of husbandry in which these metals are attached to wood. The wood of our forests has proved, in many instances so superior as to be eagerly sought, for handles, as of shovels, spades, forks, &c., by eastern manufacturers of those articles, while the testimony is daily being confirmed that we have within the limits of our State the machinists and skilled operatives to prepare and combine the wood, the iron and the steel, so as to produce agricultural implements and farming tools of every description, at least equal to any which are turned out by the best appointed eastern manufactories.

We published in our issue of the 1st inst., among the premiums awarded at the fair of the *United States Agricultural Society*, recently held at Chicago—awards to Messrs. *Waters, Lathrop and McNaughton*, of Jackson, in this State for the best hay rakes, best grain cradles, best spades, best shovels, and best manure and digging forks. Similar classes of goods from the same enterprising firm—we perceive were decorated by the Committee, with the blue ribbon and awarded first premiums at the great fair at St. Louis, Missouri. It is much regretted, that by a railroad failure, their large agricultural implements arrived too late for exhibition at St. Louis.

At the late county fair in Jackson county, proverbially the largest county fair in the State, under a very strong pressure of competition from other States, the large agricultural implements of *Waters, Lathrop & McNaughton* received first premiums, and a horse power of their manufacture, (not on the list of the committee) a discretionary premium. They had first premiums on Square Scotch Harrow, Cultivator, Improved Horse Rake, and on all the classes of Mowing and Reaping Machines, viz.: Mower, Single Reaper and Combined Reaper and Mower—all of Aultman's Patent, of which they are now the sole manufacturers in this State (except for a small section in the South West) as they are also of the Mower and Reaper of Allen's Patent, of New York.

Of the grand display of their larger and smaller tools and implements at our State Fair in this city we shall have occasion to speak elsewhere. It will be seen by reference to the premium list that they swept off prizes by the wholesale.

For joy in the achievements of our own State and for our regards especially to our agricultural population we are glad to witness these triumphs of art and skill—and trust that our readers will serve at once their own interests and the advancing prosperity of the State by availing themselves of the advantages presented by Michigan manufacturers.

General News.

—An insurrection broke out on Monday at Harper's Ferry, Va. Several hundred blacks and whites were engaged in it, but the origin and object are as yet not clearly stated. On Tuesday large bodies of military rushed the spot and a conflict took place in which fifteen of the insurgents were killed and a number wounded. It is thought that order will now be restored.

—The Pope of Rome has been very ill of fever, but at last accounts was recovering.

—The agitation in Germany is increasing in favor of a firm, strong, and central government, and the convocation of a national assembly in lieu of the present diet, and Prussia is called upon to take the initiative in measures.

—Within three or four months the Agricultural Department of the Patent Office will have one hundred thousand vigorous tea plants ready for gratuitous distribution. It is expected that American grown tea will enter the market within five years.

—An investigation now in progress into the Agricultural Bureau at Washington it is expected will show a deficit of \$100,000.

—Hon. John Y. Mason, our Minister at Paris, died of apoplexy of the 3d inst.

—President Castilla, of Peru, a resolute and energetic man, was, by latest accounts, fitting out a formidable expedition against Ecuador; but it was believed that Ecuador would yield to the Peruvian ultimatum before the final outbreak of hostilities.

The Household.

She looked well to the ways of her household, and ateth not the bread of idleness.—PROVERBS.

EDITED BY MRS. L. B. ADAMS.

OCTOBER.

BY E. HATHAWAY.

Again wild Boreas with rude finger shakes
The ripened clusters from the crimson vine,
Old Autumn, hoarding of the vintage, breaks
A brimming bumper of the glowing wine;
While heaping o'er the harvest horn he takes
Pomona's treasures shine.

Through all the day, from the first peep of morn,
I hear the creaking of the loaded wain,
I list the rustle of the ripened corn,
And mark the gleaming of the golden grain,
And roam the while where luscious fruits adorn
The orchard boughs again.

In paths that deepen in the woodland maze,
Are truants wandering in their joyance free,
Intent with hoarding, for the wintry days,
The brown nuts showering from each bounteous tree;
Blending their voices with the wilder lays
Of Autumn's minstrelsy.

There lies a glory on each sobered scene,—
The vale wide stretching to an ampler view,
The hills reposing in their sombering sheen;
The woods far brightening in the deepening blue;
Changing their mantle with its summer sheen,
For Autumn's gaudiest hue.

The noontide lustre is more softly shed,
Like mildest splendors of a sunnier clime;
The brook runs listless in its pebbly bed,
With lower murmurs in its rippled chime,
The dry leaves rustle to the falling tread
Of the slow lingering time.

A calm sits brooding in the tempered light,
The sky o'er arches with a kinder blue;
The morn's upspringing is more sweetly bright,
The days more lovely the more brief and few;
The stars do kindle on the dome of night
More tenderly and true.

The lazy hours seem grown supremely long,
The loitering sun slants through the dreamy haze,
As he would fain the falling year prolong,
Or cheer his dying with serenest rays;
To these oh, Autumn these alone belong
Divinely golden days!

And oh, what joy, if in life's waning years,
Their summer radiance, with their storms o'er passed
Our days shall brighten as our autumn nears,
A heavenly halo on its fading cast;
Their suns still kindle as their beauty sears,
More lovely till the last.
—Little Prairie Ronde.

The Children.

Dr. Hall, in his *Journal of Health*, makes the following remarks in relation to the care and dress of children:

"The reason why children die is because they are not taken care of. From the day of birth they are stuffed with food, choked with physic, sloshed with water, suffocated in hot rooms, steamed in bed clothes. So much for in doors. When permitted to breathe a pure air once a week in summer, and once or twice during the coldest months, only the nose is permitted to peer into daylight. A little later they are sent out with no clothes at all, as to the parts of the body which most need protection. Bare legs, bare arms, bare necks, girted middles, with an inverted umbrella to collect the air and chill the other parts of the body. A stout, strong man goes out on a cold day with gloves and overcoat, woolen stockings, and thick double-soled boots, with cork between and rubbers over. The same day a child of three years old, an infant in flesh and blood, and bone and constitution, goes out with soles as thin as paper, cotton socks, legs uncovered to the knee, neck bare; an exposure that would disable the nurse, kill the mother in a fortnight, and make the father an invalid for weeks. And why? To harden them to a mode of dress which they are never expected to practice. To accustom them to exposure, which a dozen years later would be considered downright foolery. To rear children thus for the slaughter pen, and then lay it to the Lord, is too bad. We don't think the Almighty has any hand in it. And to draw comfort from the presumption that he has any agency in the death of a child, in the manner of the quoted article, is a presumption and a profanation."

Severe as these reflections may seem, they are merited by thousands of mothers who daily turn their little ones out upon the streets in precisely the condition described. Not a day passes that we do not see the little bare-legged, blue-kneed creatures trotting along beside their warmly-dressed mothers, and carrying the price of a comfortable outfit in the plumes, rosettes and ribbons with which their useless hats are decorated.

Last week, a mother, whom we had been accustomed to see thus attended, passed by alone, draped from head to foot in the deepest mourning.

"What friend has Mrs. — lost?" was the natural inquiry.

"O, her little girl is dead," was the reply. "Dear little thing, she was such a beautiful child, and her mother almost worshipped her. She used to dress her so like a doll, and was so proud of her beautiful fair complexion, and her plump white neck and shoulders. Poor woman! she bears up under the loss

wonderfully, and seems to take it as a dispensation of Providence, to wean her from her idol."

"What did the child die of?"

"Croup. She took cold about the time of the equinoctial storms, when the weather was so changeable. They did not think much of it till the croup set in, and then it was too late."

Exactly. We remember well the last time we saw her upon the street—a fair, handsome child to look at, and one of which any mother might be proud. She was perhaps five or six years of age; her dress was of light material, scarcely reaching to the knees, and was expanded by hoops almost to its utmost limit, displaying the embroidery of a light under-skirt and the nicely frilled pantalettes below. Thin white stockings covered the length of legs below the pantalettes, and the daintiest thin-soled slippers were on her feet, secured from dropping off as she stepped by ribbons tied around the ankles. The little hat upon her head supported a mass of lace, roses and ribbons. A thin, embroidered merino cape was fastened around her throat, but the wind kept it constantly blown back, leaving her arms and neck and shoulders bare. It was one of those chilly, damp, windy days about the commencement of the autumn equinox of last month, and the mother walking beside her child was clothed in heavy, dark silk, suitable for the day and the season, her shawl large and warm, her feet encased in comfortable gaiters, and her hands in dark kid gloves, while the little one she held shone purple through the open lace half-mits.

Now the rosy face, with its sunny blue eyes closed forever, is lying under the green turf of Elmwood, and the lonely mother, trailing her black garments through the streets, charges Providence with her bereavement.

Loneliness of Heart.

How wearily the life of a sensitive and high-toned heart drags on when chained to a continual routine of mechanical duties,—and the soul's half-articulated cry for sympathy, without an answer! Faith often cures their longings; but it is so hard to give a soul to heaven that has not first been trained in the fullest and sweetest human affections! Too often they fling away their hearts on an unworthy object. Too often they pine in a secret discontent, which spreads its leaden cloud over the morning of their youth. The immeasurable distance between one of these delicate natures and the average youths among whom is like to be her only choice, makes ones heart ache. How many women are born too finely organized in sense and soul for the highway they must walk with feet unshod! Life is adjusted to the wants of the stronger sex. There are plenty of torrents to be crossed in its journey; but their stepping-stones are measured by the stride of man, and not of woman!—*The Professor.*

Proof of the Difference.

Mrs. Stowe, in her late work, *The Minister's Wooing*, says, "Spite of all the treatises that have lately appeared, to demonstrate that there are no inherent diversities between men and women, we hold to the opinion that one thorough season of house cleaning is sufficient to prove the existence of an awful and mysterious difference between the sexes, and of subtle and reserved forces in the female line, before which the lords of creation can only veil their faces with discreet reverence."

We have on hand two more numbers of *Recollections by Slow Jamie*, one for November and one for December, which we shall reserve for the first weeks of the months for which they are written. Heretofore one has been given every week to allow him to catch up with the months of which he wrote.

Harriet Martineau on Female Education.

It will be an immense advantage when the day comes for boys and girls learning and playing together, as the children of several foreign countries do. Climbing trees is admirable exercise for everybody; and so is cricket, and trap-ball, and ball play of all kinds; and racing and jumping. Instead of this, we see not a few schools where the girls, after sitting and standing all day, are taken out for a walk in the twilight to save lighting candles. They seldom feel the sun; they have chilblains and other ailments from bad circulation; and in such schools nearly every girl has more or less distortion of the spine when she has been there more than two years. In the last century people knew no better. Little girls were put upon hard benches without backs, and so high that the feet hung in the air; and so perched, they were required to sit bolt upright and sew for hours. The consequence was the deformed shoulder, the hump-back,

the weary aching spine which many thousands of English women have carried to the grave. There is no more reason for women being crooked than any other creature born with a proper backbone; and this is better understood than it used to be. We see that the seats in schools are oftener accommodated to the height of the children; and if leaning back is not countenanced, there is more frequent change of posture and of occupation. Calisthenic exercises, and even the inclined plane for the backs of fast-growing girls, are common sights in our day. The improvement is marked; but the condition of school-girls needs more consideration than has yet been given to it. Their average of health is far below that of boys; more of them will languish in invalidism; fewer will have genuine robust health; more, in particular, will die of consumption in ten years. The main cause of this is the unequal development of the faculties. There is too much intellectual acquisition, though not too much mental exercise, if it were made more general; and there is an almost total absence of physical education. If the muscles were called upon as strenuously as the memory to show what they could do, the long train of school-girls who institute the romance of the coming generation would flock merrily into ten thousand homes, instead of parting off—some to gladden their homes, certainly, but too many to the languid lot of invalidism, or to the actual sick-room; while an interminable procession of them is forever on its way to the cemetery—the foremost dropping into the grave while the number is kept up from behind. Many a survivor will be still wondering, with grandchildren around the fire, that this and that and the other pretty or clever schoolfellow should have died so early; and at the same time, papa, at thirty, will remark on the number of the fellows who left school with him who have had to go to Maderia. Some have rallied; but for most it was merely the choice of a grave under the myrtles there, or in the sea, or in the cemetery at home.

When a dragon devoured youths and maidens in ancient times, somebody was always found to go out against him, and to conquer him at last. We must not be less watchful and devoted than our forefathers.—We must rescue our youths and maidens from an early doom.

Duties of Women.

If we reject, on the one hand, the idea of female domination as ridiculous and absurd, so we must equally reject, on the other hand, the idea that the boundary of woman's rights is to be found in the arbitrary convenience of man. It is said that woman was made for man, and was born to obey him. Yes, it is true that woman was made for man, but not without reference to herself. Indeed, we insist that the more she looks to her own nature and serves that faithfully, the better she will answer the other end of her being, and show the more clearly that she was indeed made for man. According to the present system, she is often anything rather than a help-mate for him, or he for her. Again, it is evident that, if woman is a responsible being, there must be a limit to her submission and obedience to man. If she is bound implicitly to obey, without reference to her own convictions of right and wrong, she cannot, as a matter of course, be held responsible for her actions; these proceeding not from her own free will, but the imperative commands of another. Accordingly, we find that obedience is not the first and highest duty of woman. She is bound, in common with man, to inquire diligently into all the duties of her position, and to pursue those duties sedulously; and were she commanded by father, brother, or husband, to do any thing inconsistent with her ideas of rectitude, she would most obviously be wronging her own conscience were she to neglect its whispers for the more clamorous orders of her relatives. We agree at once that woman is bound to obey; but only when obedience does not contradict her own convictions of duty. So that, evidently, her obligation as a rational and responsible creature, to judge for herself, goes before her duty as a woman to obey her husband, in all things not contrary to her own conscience.—*Ex.*

Madame Jumel, widow of Aaron Burr.

This lady is still living, and annually visits Saratoga. The *Saratoga Sentinel* says: "She comes here ostensibly to look after an estate which she owns, located near our village, but, like all other ladies, she mingles with, and seems to enjoy, the festivities of this gay watering place with as much delight as if she was the reigning belle of the season. "Madame Jumel, once the wife, and now the widow of the celebrated Aaron Burr, is indeed a very remarkable woman. Although she has outlived most of her contemporaries, having attained to upwards of eighty years,

she seems to be just as full of life and vivacity as she was forty years ago, and apparently possessing all her faculties unimpaired.

"She still keeps up her splendid country seat, which is located at Washington Heights, on the Island of New York, and which she has owned for upwards of a quarter of a century. This residence, which is unsurpassed for the beauty of its location, was at one period of the revolutionary war the headquarters of General Washington, while the American army were encamped at Fort Washington. The mansion and grounds have been adorned by Madame Jumel, with many rare objects of art collected by her during her travels in foreign countries."

Fall and Winter Fashions.

In dresses we have nothing especial to record. The round waist is likely to continue popular, at least through the winter, except for full toilette, where the corsage is made with a deep point behind and in front. Sometimes, when closing in front, it is formed with two points. A good many dresses are also made open about half way to the waist, the fronts turning back and forming lapels. This affords an opportunity for the display of an elegant chemisette or habit-shirt. To many figures this is extremely becoming.

The majority of sleeves are still made flowing, although generally set in a small cap, or with the upper part fitting close, and covered by an epaulette; but merino and cashmere dresses will have sleeves fitting nearly closely to the arm, and made in puff, either a la Marie Stuart, graduated from shoulder to wrist, or with three longitudinal puffs over the front of the sleeve, the other half being plain like that of a coat. The puffed part is finished down the entire sleeve by lace, or quilled ribbon, which last material is extensively used for all trimmings.

Dresses of the more expensive class are made much with plain full skirts, ornamented in various ways, with broad rich ribbons, set on in waves, vandykes, and other novel styles. Dresses of organdie and tarlatane for evening toilette, are almost invariably flounced; the flounces headed by ruches of ribbon.

For out-door garments, we observe that shawls, (of a very handsome kind only,) are dividing the empire with mantles. The Stella shawls are, happily, consigned to the oblivion they have long merited, except as mere wraps. Long shawls, India or French, will, however, be very fashionable.

Mantles are very generally made, set in large box-plaits along the back, into a cape fitting closely to the upper part of the person. This gives a much better form to the figure, than the clumsier cut of last year.—They also, generally, are cut to form pretty and fashionable sleeves. Hoods are very popular, and various in form; and the size of all the mantles is ample not to say voluminous.—*Ladies' Am. Magazine.*

Mrs. Rueful.

A highly proper, and pious, and thoroughly unexceptionable person is our worthy friend, Mrs. Rueful — but oh! the depressing influence of her presence! Unquestionably she must carry an invisible supply of "low spirits" bottled up and stored in her reticule! The cork is extracted by the first word she utters, and the blue demons escape, and complacently light down upon her neighbors' hearts, and grow heavier and heavier, where they sit, until content, and hope and mirth are crushed out by their incubus-like weight. Nor do the impious band take their leave when she departs,—once introduced they are apt to haunt the new abode until it becomes a familiar resting place.

Well may one dread the visitations of good Mrs. Rueful, who leaves such enemies to peace behind her! She glides into your home with tread so light that you think, perforce, upon noiseless footfalls in the chambers of sickness and sorrow. The steady gloom of her countenance reminds you of an autumnal sky, when the clouds thicken and darken with the menace of "falling weather" of incalculable duration. She takes your hand with startling gravity, sits down beside you with a sigh, looks inquiringly and compassionately into your face with misty, smileless eyes. She speaks to you in a voice, soft and plaintive, that often drops into a dolorous whisper, and gives you a sensation of vague uneasiness. Her touch sends through your veins a cold foreboding shudder—her gaze communicates an indefinable conviction that you must be an object of pity. You may not exactly "think of your sins" when Mrs. Rueful appears, but you involuntarily think of your griefs—if you have any—and who has none?

Mrs. Rueful is a prophetic reader of faces, and she is constantly discovering some dire-

ful presage in those of her acquaintances.—She groans at a countenance beaming with gaiety, for she is certain it will shortly be clouded with sorrow. She dreads to hear a joyous laugh, for she knows that, in the natural course of events, it must be followed by a sob of anguish. She eschews mirth, because it is the forerunner of affliction. If she sees a friend in a high state of health, she solemnly assures him that he is threatened with a fit of illness. In vain the amazed hearer declares that he never felt better in his life, she tells him that is precisely the way people feel just before they are stricken down; and finally persuades him that the rose on his cheek is a hectic flush—his robustness the sign of alarming plethora—and his general healthfulness a premonitory symptom of disease.

Mrs. Rueful always has a "pet sorrow" of her own—she could not live without one!—She nurses this darling grief—hugs it to her heart—tricks it out with lugubrious semblances—parades it before the public eye—exaggerates it—and now and then changes it for a lesser or greater trouble—but without an incurable woe she could not exist! Her strong-minded, matter-of-fact friends affirm that her mighty miseries resemble the sorrows of my Lord Plumcake—that a goodly share of this world's goods has been awarded her—and that she ought to be a very grateful, contented, happy person;—but Mrs. Rueful is vexed to the heart at such an assertion.—How can she be happy, she inquires in a tone of irritable reproach, when she knows that countless calamities are in store for her?—When she is haunted by hydra-headed shadows of anticipated misfortune?—by numberless swords suspended from hairs over her hapless head—by perpetual earthquakes ominously rumbling beneath her very feet!

Mrs. Rueful's sun is under a constant eclipse, and she fairly revels in the dark side of creation. If a friend is ill, her imagination unceremoniously lays him in his coffin; for no figure of hope sits at the gate of her heart to open its portals to the possibility of his recovery. And when, now and then, her prediction is verified, and a beloved one is freed from anguish and called to joy, Mrs. Rueful makes the most of his affliction. She never bates an inch of the strictest forms of conventional mourning. She is frantic in her lamentations and encourages the most violent demonstrations of grief in others. She recalls from the faintest approach of consolation. Her gaze is bent steadfastly downward to the grave, and the mouldering ashes that lie there; her eyes resolutely refuse to look upwards and contemplate the enfranchised spirit rejoicing in its newly awarded felicity. This "garb of woe" is her favorite attire—a knell is the sweetest music to her ears—and if she wore an ornament to correspond with her most cherished state of mind it could only be a miniature death's head, or cross bones, frantically wrought. And yet she will tell you that she has made open profession of Christianity and that she believes in Heaven! Certes, she never acts as though any of her departed friends had gone there!

The dread of accidents keeps Mrs. Rueful in a perpetual fever of anxiety or chill of terror. She never thinks of ships without shipwrecks—steamboats always conjure up an image of bursting boilers, and dismembered limbs flying through the air; railroads are synonymous with crushed limbs and mangled bodies,—every mode of locomotion is the medium of lurking peril,—every place of rest the abode of a concealed danger. Mrs. Rueful firmly believes that earthquakes and tornadoes will spread to every part of the world, and no being living will escape their destroying fury. When war commences, she is certain that it will extend over the whole globe, and that peace can never be restored. She is sure that lightning always strikes. She is certainly on the lookout for fatal epidemics, and beholds cholera and yellow fever taking rapid strides towards her own especial habitation. No locality is salubrious—no haven safe.—Country roads, to her, are infested by imaginary snakes, phantom mad dogs and shadowy crazed bulls,—and city streets teem with risks too manifold to enumerate. Robbers dog her steps by day, and shake her shutters at night. She burns her own home and the houses of her friends (in fancy) at least once a week, and determinedly buries herself and them in the ruins. To be sure they all rise again, phoenix-like, from the ashes, but only to go periodically through the same illusory process of annihilation.

She has no faith in palmy days and prosperous times—indeed, she totally ignores prosperity. To her thinking, trade never thrives—professions mean beggary—art is at a dead stand still—literature is, and always will be stagnant.—The rich are on the verge of bankruptcy—the poor are daily growing

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THE MARKETS.

Flour and Meal.

The state of the market is this week decidedly more encouraging than last. Although breadstuffs in Liverpool are reported by the last steamer to have a declining tendency it is generally understood that a further improvement must eventually take place for the reasons, first that there is clearly a deficiency on that side of the water; and, secondly, it is manifest the producers on this side are in no haste to market their grain while prices remain low. Hence, although there is still but little margin for profit, and the probability is, it will not be. The same is the case in relation to this market and New York. Though a temporary decline is felt there, here the market is firm in anticipation of a speedy advance.

At a full meeting of the Board of Trade of this city on Thursday, a system of grain inspection was unanimously adopted. The matter had been previously discussed, and a committee, consisting of George W. Bissell, Joseph Aspinall, and John G. Erwin, appointed to prepare a plan and arrange a system of grades. Their classification, which was adopted without alteration, was as follows:

EXTRA WHITE WINTER—Shall be wheat of uniform color, plump and full berry, clear of foul, or foreign substance.

No. 1 WHITE WINTER—Plump, full berry, although not so even in color as extra, clear from foul stuff.

No. 2 WHITE WINTER—Composed of such wheat as will not pass No. 1, small berry, shrunk or uneven, or mixed with rye or other foul substance.

No. 1 RED WINTER—Plump and clean, free from rye and other foul stuff.

No. 2 RED WINTER—Comprises such wheat as is not clean, small shrunk berry, bleached in color, mixed with rye or other foul stuff.

The time when this should go into effect was not definitely concluded on, but it is understood that it will not be later than Tuesday or Wednesday next. Mr. Joseph Hatch was chosen Inspector without dissent, and his fee was fixed at 6 cents per 100 bushels on all inspected. The whole arrangement will, without doubt, give very general satisfaction.

Flour—Has throughout the past week remained moderately active. There has been some demand for shipment, and prices are firm. We quote \$4.84 50 for red wheat brands, and \$4.62 50 for white ditto.

Wheat—Continues in active demand, all offering being readily taken at \$1.04 00 for prime red, and \$1.04 12 1/2 for fair to prime white. Extra has brought as high as \$1.15.

Rye and corn—Are entirely nominal at 60¢ for the former, and 50¢ for the latter per bushel. There is little if any of either grains on the market, and no inquiry.

Oats—Which for some time past have been almost nominal, have this week found sale to some extent at 35¢ per bu. There is very little demand except for consumption.

Barley—Meets ready sale at \$1.20 25 per cwt. for shipping, and \$1.31 40 for winter, with very little of the latter offering.

Milk feed—Is dull and inactive, only a few small sales of corn meal being reported. These were at \$1.70 per cwt. for bolted.

Potatoes—Are plenty and a trifle lower. From wagons they sell at \$2.50 25 per bu. None received by rail.

Butter—Is plenty and meets but slow sale at 13¢ 1/2 for firkin and roll.

Eggs—Are steady at 11¢ by the barrel, or 12¢ 1/2 by the smaller quantities.

Live Stock, &c.

The market in this city remains entirely unchanged. A prominent butcher reports that he has bought during the week 86 head of beef cattle at \$5.50 per cwt. The same party has also taken 120 good sheep at \$4.37 1/2 each. Dressed hogs are quoted \$5.50 per 100 lb and live hogs \$4.50 42 1/2 gross. For this latter stock there is a better demand as the weather grows cooler, but the demand is fully supplied. All kinds of stock are plenty.

At Albany, on Monday, the receipts both of cattle, sheep and hogs were much larger than on last week. Nevertheless the Journal says:

The market for beefs is more active than we remember to have seen, at the opening, for several weeks, and yet the receipts are five or six hundred more than last week. The eastern men found a pretty good market at Brighton last week, the demand being active, and they are here in full numbers to-day, buying rather liberally in anticipation of a continuance of the active trade then met with. On the contrary, the New Yorkers found in the city, last week, an over supply, and realizing little if any profit on their speculations, are not disposed to venture very deep. They expect, too, that our market, which opens brisk, will become less firm before the close, in view of the increased receipts which, it must be admitted, are heavier than any of the holders anticipated. The action of the eastern men, however, may disappoint them. The indications are that over 1000 head will be taken for the east, and in the event, what with the "stores" and the number retailed hereabouts, there will be scarcely more than 1500 to go to New York. If the number does not exceed this estimate, owners will prefer to ship through and take their chances next Wednesday rather than make any noticeable concessions. We advance our quotations on the better grades, remarking that the ruling prices are but little if any better than last week, but the improvement in quality of the same classes of cattle commands higher rates, and quote accordingly:

	This week.	Last week.
First quality.....	4 1/2 @ 5 1/2	4 1/2 @ 5 1/2
Second quality.....	3 1/2 @ 4 1/2	3 1/2 @ 4 1/2
Third quality.....	2 1/2 @ 3 1/2	2 1/2 @ 3 1/2
Inferior.....	2 1/2 @ 3 1/2	2 1/2 @ 3 1/2

Of sheep and lambs the receipts also were unusually heavy. Fortunately the weather is favorable for slaughtering, and prices have not receded so much as might be expected in view of the unprecedented large supply. Still the market is considerably depressed. Nearly 5000 head have been taken for slaughter here, and we give a few sales to indicate the tone of the market: 190 at \$3.15 per head, 66 at \$4.40 per head, 118 averaging 95 lbs at \$3.50 per head, 205 at \$3.37 1/2, 101 at \$3.75, 206 at \$3.19 and 450 at an average of \$3.25 per head.

Hogs are in light supply and fair request. 1364 were sold, ranging from 5 1/2 to 6 1/2¢.

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THE MICHIGAN FARMER.

1890. SUMMER ARRANGEMENT. 1890.

MICHIGAN SOUTHERN
AND
DETROIT, MONROE AND TOLEDO
RAIL ROAD.

On and after Monday, April 18th, 1890, Passenger Trains will run as follows:

Leave Detroit for Adrian and Chicago at 6:45 A.M. and 5:00 P.M.

Arriving at Adrian at 9:57 A.M. and 10:00 P.M.

Chicago at 4:10 P.M. and 7:00 A.M.

For Monroe, Toledo, Cleveland, Cincinnati, Buffalo and New York: Leaves Detroit at 6:45 A.M. and 1:00 P.M.

Arrives at Monroe at 8:38 A.M. and 3:20 P.M.

Toledo at 9:55 A.M. and 4:30 P.M.

Leaves Toledo at 10:15 A.M. and 5:30 P.M.

Arrives at Cleveland at 12:10 P.M. and 9:20 P.M.

From Chicago for Detroit:

Leaves Chicago at 6:00 A.M. 8:00 A.M. and 8:00 P.M.

From Cleveland for Detroit:

Leaves Cleveland at 4:00 A.M. 11:25 A.M. and 6:20 P.M.

Toledo at 4:10 P.M. 10:35 P.M.

Trains arrive at Detroit from Chicago, Adrian, Cleveland and Toledo at 1:35 A.M., 12:15 P.M. and 7:15 P.M.

CONNECTIONS:

The 6:45 A.M. Train from Detroit makes direct connection at Adrian, with Express Train for Chicago and Jackson. Arriving in Chicago at 7:00 P.M. in time to connect with the Trains of all Roads running west of Chicago; and at Toledo with Express Train for Cleveland—arriving in Cleveland at 3:16 P.M. making direct connection with Express Train for Buffalo and New York; arriving in New York at 1:20 P.M. and with the Express Train for Pittsburgh.

The 1:00 P.M. Train connects at Toledo with Express Train for Cleveland, Buffalo, and New York—arriving in Cleveland at 9:20 P.M. and New York at 9:30 P.M. next evening, and with Express Train for Pittsburgh.

The 5:00 P.M. Train, connects at Adrian with Express Train for Chicago—arriving in Chicago at 7:00 A.M.

The 6:30 P.M. Train from Cleveland, and 10:35 P.M. Train from Toledo, arrives in Detroit at 1:35 A.M. Making direct connection at Detroit with Express Train on Great Western Railway for Suspension Bridge and Niagara Falls.

The 11:25 A.M. Train from Cleveland; the 6 A.M. Train from Chicago via Adrian, the 5 A.M. Train over Air Line via Toledo and 4:10 P.M. Train from Toledo, makes direct connection at Detroit with Express Train on Great Western Railway for Suspension Bridge and Niagara Falls, leaving Detroit at 8:00 P.M.

Direct connections are also made, at Detroit with the Detroit and Milwaukee Railway.

Sleeping Cars accompany the Night Trains between Adrian and Chicago.

No change of Cars between Detroit, Adrian and Chicago.

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Twenty-three stumps have been pulled with this Machine in an hour and fifteen minutes. The undersigned will sell machines and rights to use and manufacture in any part of Michigan except the counties of Hillsdale, Branch, Wayne, Washtenaw, Jackson, Calhoun, Kalamazoo, Van Buren, Macomb, Genesee, Shiawassee, Saginaw, Tuscola and St. Clair, which are already sold.

All necessary information as to prices, and mode of using, will be given on application to

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The Machines are manufactured at the Detroit Locomotive Works from the best Lake Superior Iron. [3c]

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DRAIN TILE MAKER.

The Best and Cheapest Tile Machine in the World.

Forty-one first Premiums awarded to it at State and County Fairs. First Premium at the National Fair, at Louisville, Ky., 1887.

The TILE MACHINE invented by JOHN DAINES, of Birmingham, Oakland county, Michigan, is now being manufactured in the most thorough manner, and is offered to the farming community as the

Cheapest, Most Labor-Saving and Most Complete Invention,

and enabling farmers to make their own Tiles, that has yet been put before the Agriculturists of the United States at a reduced price.

These machines are made of iron, are easily worked, any man being able to manufacture a first rate article after a few hours practice.

They cost delivered in Detroit, only \$100. They have two dies, for three and four inch tile; and extra dies to accompany the machine cost \$20.00 each.

These machines will manufacture per day, according to the force employed, from 150 TO 250 RODS OF

HOBESHOE OR PIPE TILE. The machine weighs

about 500 pounds, and can be packed and sent to any part of the United States, or to foreign countries, as easily as a piano.

With this machine, any farmer who has a fair quality of clay on his farm, can manufacture his own Tiles at a cheap rate, and easily save the price of the machine by avoiding the cost of transportation. The machine when in operation, takes up no more room than an ordinary sized kitchen table; it may be worked by two or three men as may be found most convenient and economical, or a man and two boys can keep it in full operation.

For Simplicity, Durability, Economy, Cheapness, and amount of work, this Tile Maker Challenges the World!

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FLOUR, WHEAT, CORN, OATS, WOOL, ASHES, HIDES,

And all other products of Michigan, at prices much below those of former years. Our lines are THE MODEL LINES OF THE COUNTRY.

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GLEN BLACK HAWK

FOR SALE.

GLEN BLACK HAWK, 6 years old, jet black, perfectly kind and gentle in the harness, single or double—took the second premium, \$50, at the National Horse Show at Kalamazoo, in October last—is a good traveler, and for style cannot be beat; perfectly sound, and sure foot gettier; will be sold at a bargain. Any one wishing a good stock horse cannot do better than give me a call. Pedigree—Sire Lone Star, dam Messenger. Lone Star was by Vermont or Hill Black Hawk, was a jet black, and sold to a Philadelphia company for \$1000.

F. E. ELDER, Detroit, January 1889. [15] 2m

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What? Why a Beautiful Head of Hair.

Because it is the ornament God Himself provided for all our race. Reader, although the rose may bloom ever so brightly in the glowing cheek, and the eye be ever so sparkling, the teeth be those of pearls, if the head is bereft of its covering, or the hair be snarled and shriveled, harsh and dry, or worse still, if sprinkled with gray, nature will lose half her charms. Prof. Wood's Hair Restorative, if used two or three times a week, will restore and permanently secure to all such an ornament. Read this carefully, and judge. The writer of the first is the celebrated Pianist, Thalberg.

New York, April 19, 1888.

DR. WOOD—Dear Sir—Permit me to express to you the obligations I am under for the entire restoration of my hair to its original color: about the time of my arrival in the United States it was rapidly becoming gray, but upon the application of your "Hair Restorative" it soon recovered its original hue. I consider your restorative as a very wonderful invention, quite efficacious as well as agreeable. I am, dear sir, yours truly,

S. THALBERG.

"Drych a'r Gwyllydyet."

Welsh Newspaper office, 13, Nassau st., April 12, 1888.

PROF. O. J. WOOD—Dear Sir—Some month or six weeks ago I received a bottle of your Hair Restorative, and gave it my wife, who concluded to try it on her hair, little thinking at the time that it would restore the gray hair to its original color, but to her as well as my surprise, after a few weeks' trial it has performed that wonderful effect by turning all the gray hairs to a dark brown, at the same time beautifying and thickening the hair. I strongly recommend the above Restorative to all persons in want of such a change of the hair.

CHARLES CARDEW.

New York, July 25, 1887.

PROF. O. J. WOOD—With confidence do I recommend your Hair Restorative, as being the most efficacious article I ever saw. Since using your Hair Restorative my hair and whiskers which were almost white have gradually grown dark; and I now feel confident that a few more applications will restore them to their natural color. It also has relieved me of all dandruff and unpleasant itching, so common among persons who perspire freely.

J. G. KILBY.

Chicago, Ill., May 1, 1887.

The Restorative is put up in bottles of 3 sizes, viz: large, medium, and small; the small holds 1/4 of a pint, and retails for one dollar per bottle; the medium holds at least twenty per cent. more in proportion than the small, and retails for two dollars per bottle; the large holds a quart, forty per cent. more in proportion, and retails \$3.

O. J. WOOD & CO., Proprietors, 312 Broadway, New York, (in the Grand Central Building Establishment), and 114 Market St., St. Louis, Mo.

And sold by all good Druggists and Fancy Goods Dealers. 32-3m

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Is the most powerful and most economical machine in use for pulling stumps, and will clear a field in less time than any other invention of a like kind.